

**IN THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Claim 1 (Currently Amended):** A method of assembling a disc in a disc apparatus, comprising:

mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer ~~diameter~~circumferential edge of the disc in a direction of a center axis of the hub by a first flat member having a flat surface so as to bring an inner ~~diameter~~circumferential edge of the disc into contact with an outer ~~diameter~~circumferential surface of a rotary axis of the hub;

pressing back the outer ~~diameter~~circumferential edge of the disc contact with the first flat member and the outer ~~diameter~~circumferential edge of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member to a half of an amount of tolerance between the inner ~~diameter~~circumferential edge of the disc and the outer ~~diameter~~circumferential surface of the hub, by a second flat member having a flat surface arranged in parallel to the first flat member and in an opposite side to the center axis of the hub; and  
fixing the disc to the hub of the spindle motor by a clamp member.

**Claim 2 (Currently Amended):** A method of assembling a disc in a disc apparatus, comprising:

mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer ~~diameter~~circumferential edge of the disc in a direction of a center axis of the hub by a first flat member having a flat surface so as to bring an inner ~~diameter~~circumferential edge of the disc into contact with an outer ~~diameter~~circumferential surface of the hub;

pressing back the outer ~~diameter~~circumferential edge of the disc contact with the first flat member and the outer ~~diameter~~circumferential edge of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member by a second flat member having a flat surface arranged in parallel to the first flat member in an opposite side to the center axis of the hub until the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc are in contact with each other, and measuring a difference between the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc;


pressing back a half of the difference between the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc by the first flat member; and

fixing the disc to the hub of the spindle motor by a clamp member.

**Claim 3 (Currently Amended):** A method as claimed in claim 1, wherein pressurizing means for pressing the outer circumferential edge of the disc toward the center axis of the hub is provided in a portion to which the first flat

member having the flat surface is mounted to press the outer circumferential edge of the disc in the direction of the center axis of the hub.

**Claim 4 (Currently Amended):** A method as claimed in claim 2, wherein pressurizing means for pressing the outer circumferential edge of the disc toward the center axis of the hub is provided in a portion to which the first flat member having the flat surface is mounted to press the outer circumferential edge of the disc in the direction of the center axis of the hub.



**Claim 5 (Currently Amended):** A method of assembling a disc in a disc apparatus comprising:

- fixing a disc apparatus base on which a spindle motor is mounted;
- mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer ~~diameter~~circumferential edge of the disc in a direction of a center axis of the hub by a first flat member having a flat surface so as to bring an inner ~~diameter~~circumferential edge of the disc into contact with an outer ~~diameter of a rotary axis~~circumferential surface of the hub;

pressing back the outer ~~diameter~~circumferential edge of the disc in contact with the first flat member and the outer ~~diameter~~circumferential edge of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member to a half of an amount of tolerance between the inner ~~diameter~~circumferential edge of the disc and the outer ~~diameter~~circumferential

surface of the hub, by a second flat member having a flat surface arranged in parallel to the first flat member and in an opposite side to the center axis of the hub; and fixing the disc to the hub by a clamp member.

**Claim 6 (Currently Amended):** A method of assembling a disc in a disc apparatus comprising:

fixing a disc apparatus base on which a spindle motor is mounted;

mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer ~~diameter~~circumferential edge of the disc in a direction of a center axis of the hub by a first flat member having a flat surface so as to bring an inner ~~diameter~~circumferential edge of the disc into contact with an outer ~~diameter~~of a rotary axiscircumferential surface of the hub;

pressing back the outer ~~diameter~~circumferential edge of the disc in contact with the first flat member and the outer ~~diameter~~circumferential edge of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member by a second flat member having a flat surface arranged in parallel to the first flat member in an opposite side to the center axis of the hub until the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc are in contact with each other, and measuring a difference between the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc corresponding to an amount of pressing back;

pressing back a half of the difference between the outer ~~diameter~~circumferential surface of the hub and the inner ~~diameter~~circumferential edge of the disc by the first flat member; and  
fixing the disc to the hub of the spindle motor by a clamp member.

**Claim 7 (Currently Amended):** A method as claim in claim 3, wherein said pressurizing means includes a spring arranged to press the first flat member having the flat surface against the outer circumferential edge of the disc toward the center axis of the hub.

**Claim 8 (Currently Amended):** A method as claim in claim 4, wherein said pressurizing means includes a spring arranged to press the first flat member having the flat surface against the outer circumferential edge of the disc toward the center axis of the hub.

**Claim 9 (Currently Amended):** A method as claim in claim 3, wherein a displacement gauge is provided to monitor the movement of the first flat member as the first flat member having the flat surface is pressed against the outer circumferential edge of the disc toward the center axis of the hub.

**Claim 10 (Currently Amended):** A method as claim in claim 4, wherein a displacement gauge is provided to monitor the movement of the first flat member as the first flat member having the flat surface is pressed against the outer circumferential edge of the disc toward the center axis of the hub.

**Claims 11-13 (Canceled):**

**Claim 14 (Newly Added):** A method for controlling a disc apparatus comprising a base on which a spindle motor hub is mounted, and a disc mounted onto the hub, said method comprising:

providing first and second flat members with flat surfaces arranged in parallel in opposite sides of a disc relative to a center axis of the hub, to center the disc relative to a center of the hub after the disc is mounted onto the hub; and


controlling movement of the first and second flat members to center the disc relative to a center of the hub by:

pressing the first flat member having a flat surface on one side of the disc against an outer circumferential edge of the disc in a first direction relative to the center axis of the hub until an inner circumferential edge of the disc is in contact with an outer circumferential surface of the hub;

pressing the second flat member having a flat surface on the other side of the disc against the outer circumferential edge of the disc in a second direction opposite to said first direction relative to the center axis of the hub until the inner circumferential edge of the disc is in contact with the outer circumferential surface of the hub;

measuring a distance difference between the inner circumferential edge of the disc and the outer circumferential surface of the hub; and

pressing the first flat member having the flat surface against the outer circumferential edge of the disc again in said first direction until the inner circumferential edge of the disc reaches  $\frac{1}{2}$  the distance difference between the inner circumferential edge of the disc and the outer circumferential surface of the hub.

 **Claim 15 (Newly Added):** A method as claimed in claim 14, further comprising:

monitoring the movement of the first flat member as the first flat member having the flat surface is pressed against the outer circumferential edge of the disc toward the center axis of the hub.

**Claim 16 (Newly Added):** A method as claimed in claim 14, wherein the first flat member having the flat surface is pressed against the outer circumferential edge of the disc toward the center axis of the hub, via a spring.

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